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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/711,326	09/10/2004	Takahiro Nakano	S1C-04-034	5325
29863	7590	07/09/2010	EXAMINER	
DELAND LAW OFFICE P.O. BOX 69 KLAMATH RIVER, CA 96050-0069				IRVIN, THOMAS W
ART UNIT		PAPER NUMBER		
3657				
			NOTIFICATION DATE	
			DELIVERY MODE	
			07/09/2010	
			ELECTRONIC	

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

bdeland1992@gmail.com  
jdeland@sisqtel.net

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>
	10/711,326	NAKANO ET AL.
	<b>Examiner</b>	<b>Art Unit</b>
	THOMAS IRVIN	3657

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

1) Responsive to communication(s) filed on 28 April 2010.  
 2a) This action is **FINAL**.                    2b) This action is non-final.  
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

4) Claim(s) 1,3-14, 16 and 18-20 is/are pending in the application.  
 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
 5) Claim(s) \_\_\_\_\_ is/are allowed.  
 6) Claim(s) 1,3-14, 16 and 18-20 is/are rejected.  
 7) Claim(s) \_\_\_\_\_ is/are objected to.  
 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

9) The specification is objected to by the Examiner.  
 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
 a) All    b) Some \* c) None of:  
 1. Certified copies of the priority documents have been received.  
 2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

1) Notice of References Cited (PTO-892)  
 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)  
 3) Information Disclosure Statement(s) (PTO/SB/08)  
 Paper No(s)/Mail Date \_\_\_\_\_.  
 4) Interview Summary (PTO-413)  
 Paper No(s)/Mail Date \_\_\_\_\_.  
 5) Notice of Informal Patent Application  
 6) Other: \_\_\_\_\_.

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1, 3-14, 16, and 18 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 1 and 13 define a radially inwardly facing spline and a radially outwardly facing spline; however, with reference to the figure 6A and 6B, it appears that only a single spline exists (see Response to Arguments, below).

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 13, 14, and 18 are rejected under 35 U.S.C. 102(b) as being anticipated by Militana (3,168,836).

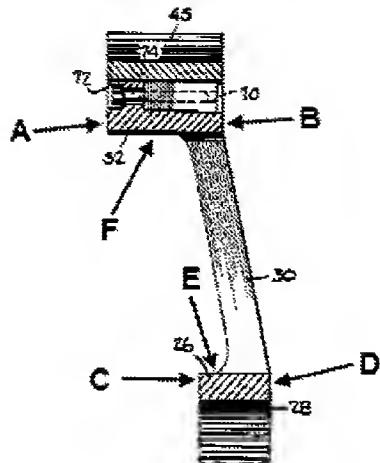


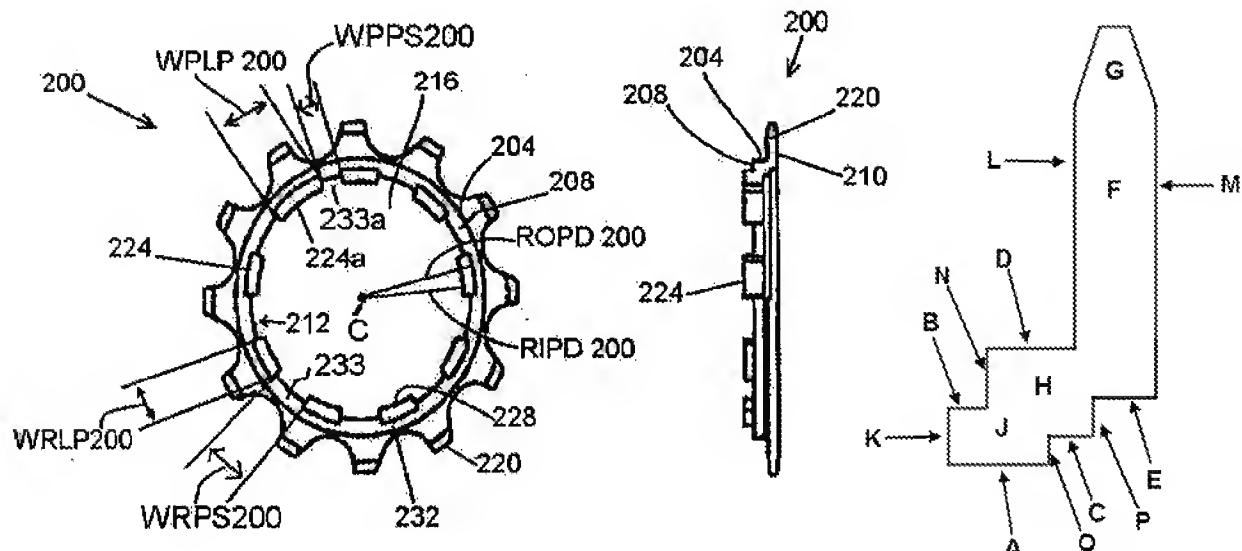
Fig. 4 (US 3,168,836)

In Re claim 13, Militana discloses, with reference to fig. 4 above, a sprocket comprising: a sprocket body (20); a plurality of teeth (45); a radially inwardly and outwardly extending spline (28), wherein the spline has a root portion (30) and a radially inner portion (26) having a side wall (C,D); wherein the spline terminates at a free end (26); and wherein a thickness of the radially inner portion (26) is greater than a thickness of the root portion (30). Examiner notes that the radially inwardly extending spline and radially outwardly extending spline are understood to be the protrusions and corresponding depressions of the spline.

In Re claim 14, see side wall (A), first side wall portion (24), teeth (45), and root portion (32).

In Re claim 18, the sprocket is understood to meet the limitations of being one-piece when fully assembled (see fig. 1).

Claims 13, 14, and 18 are rejected under 35 U.S.C. 102(e) as being anticipated by Kamada et al. (2004/0142783).



In Re claim 13, Kamada et al. disclose, with reference to figs. 3A and 3B above, a sprocket comprising: a sprocket body (200,F); a plurality of teeth (G); a radially inwardly and outwardly extending spline (A, C), wherein the spline has a root portion (H) having side walls (N,P) and a radially inner portion (J) having side walls (K, O); wherein the spline terminates at a free end (K); and wherein a thickness of the radially inner portion (J, K-O) is greater than a thickness of the root portion (H, N-O). Examiner notes that the radially inwardly extending spline and radially outwardly extending spline are understood to be the protrusions and corresponding depressions of the spline.

In Re claim 14, the sprocket has a side wall (M) and first side wall portion (F), wherein the plurality of teeth (G) extend from the first side wall portion, and wherein a

thickness of the first side wall portion (L-M) substantially equals a thickness of the root portion (H, N-L, L-M).

In Re claim 18, Kamada et al. disclose that the sprocket is one-piece.

### ***Allowable Subject Matter***

Claims 1, 3-14, 16, 19, and 20 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action.

### ***Response to Arguments***

Applicant's arguments filed 28 April 2010 with respect to the 112 rejections and 102(e) rejections have been fully considered but they are not persuasive.

Regarding the 35 U.S.C. 112 2<sup>nd</sup> paragraph rejections, the examiner understands that applicant's specification may indeed recite the claimed limitations; however, with reference to figures 6(A) and 6(B), the "radially inwardly facing spline" and "radially outwardly facing spline" appear to be one in the same. Applicant argues that, in fig. 6(A), reference number 516 identifies the radially inwardly facing splines, and 518 identifies the radially outwardly extending splines. The examiner points out that reference character 518 appears to be simply pointing to a recess of the adjacent projections making up the radially inwardly facing spline, which also appears to be the radially inner surface (524) identified in fig. 6(B). The examiner suggests amending the claims and possibly the specification and reference labels in the drawings to more

clearly identify the structure applicant is attempting to claim. The examiner also points out that a “spline” is defined as “a series of projections and slots on a shaft that fit into slots and projections on a corresponding shaft, enabling both to rotate together”. If applicant is attempting to claim the projections and slots as separate structures, instead of a single spline, the examiner suggests rewording the claims with the appropriate structure (i.e. projections or slots).

In response to applicant’s arguments regarding the 102(b) rejection of claim 13 to Militana, the examiner points out that the claim language is not specific as to order and location of the elements of the sprocket; specifically, the claim is understood to claim that a “root portion” extends radially inwardly from the sprocket body, and is connected to a “radially inner portion” on which the “radially inwardly extending spline” is located on.

In response to applicant’s arguments regarding the 102(e) rejection to Kamada et al., the examiner has now attempted to clarify the rejection by additionally identifying the side walls (N,P) of the root portion.

### ***Conclusion***

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not

mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to THOMAS IRVIN whose telephone number is (571)270-3095. The examiner can normally be reached on M-F 10-4pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Siconolfi can be reached on (571) 272-7124. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Thomas Irvin/  
Examiner, Art Unit 3657

/Bradley T King/  
Primary Examiner, Art Unit 3657